REMARKS

Claims 1, 3-22, and 24-77 are pending and are ready for further action on the merits. Claims 44-77 have been withdrawn from consideration as being drawn to nonelected subject matter.

The specification has been amended at page 5 to delete the reference to an incorrect Japanese patent number. No new matter has been added by way of the above amendment. Reconsideration is respectfully requested in light of the following remarks.

Issues under 35 U.S.C. 102

Claim 29 remains rejected under 35 U.S.C. 102(b) as being anticipated by Morimoto et al., US 5,260,384. Applicants respectfully traverse the rejection.

As the Examiner will recall from Applicants' August 27, 2004 Amendment, Applicants argued that claim 29 does not anticipate Example 4 of Morimoto et al., since the MFR values for Morimoto et al. were measured at the load of 21.6 kg whereas in the present claims, the MFR values were measured at the load of 2.16 kg.

In response, the Examiner has performed certain calculations and has determined that Example 4 of Morimoto et al. anticipates the present claims even if a load of 2.16 kg were used in obtaining the MFR values of Morimoto et al. The Examiner has taken the position that if the MFR measurements

were taken of the polymers of Morimoto using a lower load (2.16 kg), the MFR values would be lower than the reported values using a higher load (21.6 kg). The Examiner notes that the MFR value for Morimoto et al. at Example 4 is 2.9. The Examiner then performs calculations based on theoretical MFR values of 2.8, 1, 0.1 and 0.01. The Examiner finds that the result of each of these calculations gives an intrinsic viscosity ([η]) meeting the following limitation (ii_{A3}):

$[\eta] > 1.85 \times MFR^{-0.192}$ in the case of MFR < 1 and

$[\eta] > 1.85 \times MFR^{-0.213}$ in the case of MFR ≥ 1.

However, Applicants respectfully submit that the Examiner's calculations are based on **improper** assumptions.

According to the Applicants' calculation, the MFR value of Example 4 of Morimoto et al. must be **at most 0.0075 g/10min**, and hence does not satisfy the relationship (ii_{A3}) defined in claim 29. If we plug the value of 0.0075 into the first equation of relationship (ii_{A3}), we get:

$$[\eta] > 1.85 \times 0.0075^{-0.192}.$$

When we solve the right hand of the equation, we get:

$$[\eta] > 4.73$$

However, as the Examiner will note from the table at the top of column 11 of Morimoto et al., the composition of Example 4 has an intrinsic viscosity [η] of 4.71. Accordingly, the relationship of (ii_{A3}) is not satisfied, since the following equation is **false**:

$$4.71 > 4.73$$

Thus, the value of 0.0075 is a maximum value, which does not satisfy relationship (ii_{A3}) when η is 4.71. That is, when MFR is 0.0075, the value of $1.85 \times MFR^{-0.192}$ is 4.73. Applicants now provide further explanation as to why the assumption that the MFR of the polymers of Morimoto using a lower load of 2.16 kg as presently claimed, would result in a measurement of MFR which is, **at most 0.0075 g/10min.**

In the Examples of Morimoto et al., the composition is made of polymers prepared by conventional Ziegler catalyst (titanium catalyst). Generally, the MFR ratio ($MFR_{21.6kg}/MFR_{2.16kg}$) varies depending on molecular weight distribution (MWD = Mw/Mn).

When MWD is 1 (i.e., when Mw=Mn), $MFR_{21.6kg}$ is simply proportional to $MFR_{2.16kg}$. That is, when $MFR_{21.6kg}$ is 2.9 g/10min., $MFR_{2.16kg}$ is 0.29 g/10min.

However, as the MWD increases, the difference between $MFR_{2.16kg}$ and $MFR_{21.6kg}$ becomes greater. Thus, the MFR of Example 4

would never be 0.29 or more, since the synthesized polymer has an MWD of more than 1.

According to currently available data, when the MWD is 10 and the $MFR_{21.6kg}$ is 2.9 g/10min., the corresponding $MFR_{2.16kg}$ is about 0.01 g/10min. Therefore, if the MWD is much higher than 10, there is reasonable expectation that $MFR_{21.6kg}$ is less than 0.0075 g/10min. Applicants now provide an explanation as to why it is reasonable to assume that the MWD of Example 4 is much higher than 10.

The composition of Example 4 of Morimoto et al. is a mixture of the following two components (see table 3-1 of Morimoto).

Table 1

Polymer	Wt%	Viscosity η	Mw*
A2	85	23	$5.2x10^4$
B1	15	1.4	$2x10^6$

*: calculated from MarK Houwink's equation $[\eta]=K(Mw)^{\alpha}$

If we let the MWD of each individual polymer be 3, 4 and 5, respectively, then the calculated MWD of the resulting composition is as follows.

First, Mn of each polymer is as follows when we let MWD of each polymer be 3, 4 and 5.

Table 2

polymer	Mw	Mn		
		When MWD is 3	When MWD is 4	When MWD is 5
A2	$5.2x10^4$	$1.7x10^4$	$1.3x10^4$	$1.0x10^4$
B1	$2x10^6$	$0.7x10^6$	$0.5x10^6$	$0.4x10^6$

When MWD of each polymer is given a normal distribution, the MWD of the resulting composition is as follows:

Table 3

Polymer A2 (85 wt%)	MWD=3	MWD=4	MWD=5
Polymer B1 (15 wt%)	MWD=3	MWD=4	MWD=5
Composition	MWD=17	MWD=22	MWD=28

Since the polymers A2 and B1 were prepared using a titanium tetrachloride type Ziegler catalyst (see column 8, lines 19 to 48), these polymers would likely have a broad MWD, i.e., the polymers would likely have an MWD of at least 4. Thus, the composition must have an MWD of at least 20 (see table 9).

Turning to the above, when MWD is 10, and $MFR_{21.6kg}$ is 2.9 g/10min., corresponding $MFR_{2.16kg}$ is about 0.01 g/10min. In addition, if MWD is much higher than 10, there is reasonable expectation that $MFR_{2.16kg}$ is less than 0.0075 g/10min.

Therefore, it is reasonable to assume that the composition of Example 4 of Morimoto et al. has an MWD of 20 or more and as such, must have an $MFR_{2.16kg}$ of less than 0.0075 g/10min. Accordingly, Example 4 of Morimoto et al. does not satisfy the relationship (ii_{A3}) defined in claim 29.

To support an anticipation rejection based upon inherency, an Examiner must provide factual and technical grounds establishing that the inherent feature *necessarily* flows from the teachings of the prior art. See *Ex parte Levy* 17 USPQ2d 1461 (BOPAI 1990); see also *In re Oelrich*, 212 USPQ 323 (CCPA 1981) holding that inherency *must* flow as a necessary conclusion from the prior art, not simply a possible one. Since Example 4 of Morimoto et al. does not inherently meet the inventive characteristic (ii_{A3}), a *prima facie* case of anticipation cannot be said to exist. As such, withdrawal of the rejection is respectfully requested.

Allowable subject matter

Applicants note with appreciation from the section numbered as "5" on page 4 of the outstanding Office Action, the Examiner has indicated that claims 1, 3-22, 24-28 and 34-43 are allowable over the prior art.

With the above remarks, Applicants believe that the claims, as they now stand, define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

If any questions remain regarding the above matters, please contact Applicant's representative, **Garth M. Dahlen, Ph.D., Esq.**

(Reg. No. 43,575), in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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